



SEQUENCE LISTING

<110> Gould-Rothberg, Bonnie E.
DiPippo, Vincent A.
Ramseh, Tennore M.
Gerwein, Robert W.

<120> METHOD OF IDENTIFYING TOXIC AGENTS USING NSAID-INDUCED
DIFFERENTIAL GENE EXPRESSION IN LIVER

<130> 15966-601 Utility

<140> 09/717,321

<141> 2000-11-20

<150> 60/166,923

<151> 1999-11-22

<160> 50

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Rattus norvegicus

<400> 1

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<213> Rattus norvegicus

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<210> 3
<211> 484
<212> DNA
<213> Rattus norvegicus

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<220>
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<222> (455)
<223> Wherein n is g or a or t or c

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<210> 4
<211> 650
<212> DNA
<213> Rattus norvegicus

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cagcagccca gtaagctgtg ccagaaggct gtaacagtag cggagccagt gacagcgcca 180
ggctgggctg ggttctctct gtgggtgtgc acggcaaagc tgcggcctgt gggccctggg 240
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cggggcccac tactatgtgc ggcagccagg ggtcncctca gccggaagcc atcaggatgt 480
gtggccatgg tgactcgaag gctctggagg cctccggctg catccaatct gctgatgtct 540
tcacaacccc acagggcccc tcggggccaca aacaccgtgt ggccccagtg gtttgaagcc 600
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<210> 5
<211> 256
<212> DNA
<213> Rattus norvegicus

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agaagggcat gctccagctc ctgcaggaca aggattcctg cagctggctc ctgaaggaaa 180
agagtgcac cagtgagaag aggagattcc tgaaggagcg gttggcaagg ctggcccaag 240

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256

<210> 6
<211> 369
<212> DNA
<213> Rattus norvegicus

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ccacacagct gggaccaggg cgcttccaaa tgaccaggga agtggtttgt gacgagtgcc 180
ctaattgtcaa actagtgaat gaagaacgaa cactagaagt ggaaatagag cctgggggtga 240
gagatggcat ggagtacccc tttattggag aaggtagagc tcatgtggat ggggaacccg 300
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acctgtaca 369

<210> 7
<211> 167
<212> DNA
<213> Rattus norvegicus

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ctgggttttac aaggcataaa tatatagcat ctccaacagc tacctgtaga ttctgttagt 120
gcaaaacctt agaaaccctc ctggagctca aaggcatccg gactagt 167

<210> 8
<211> 594
<212> DNA
<213> Rattus norvegicus

<400> 8
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aagagcatct gcaaaggaaa tcaatcttca gagaatagca cagaaacaga aaatccaagc 180
gaacaaaaag atacatctag gccgtgttct tgttctgacc agggccgcat ttggcaaagc 240
tttctctgca cctcccttgg ttgccaagga tactttcttt tgttaaaaaa aaaagttagt 300
aagtggggcc ccactaaaac atacacaaaa gaataaaaat gttcatttta aacttaact 360
gcttcctggg tttaacaagg ataaatatat agcatctcca acagctacct gtagattctg 420
ttagtgcaaa accttagaaa ccttcctgga gctcaaaggc atccggacta gttttgtact 480
taaacaggat acgggtaaac cacttaaaat ttgccatctc tgcccaaagt gtttgcatga 540
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<210> 9
<211> 340
<212> DNA
<213> Rattus norvegicus

<400> 9
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ggtgagactc tggcttccgg ctggtagaag ccaagggttg acgcatagtt gcaaagctcc 180
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ccggagcaca caggetgagc gtgccacagc gacgacggag gccaaagcgtg gtgctgggtgg 300
tgttactttc ccgtgagttc cagcaccttc ttcaccatgg 340

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<211> 797
<212> DNA
<213> Rattus norvegicus

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cgaagacttg gagcctaaat gggtttcttc ttttagagct ttagtaccgc atccatcaga 180
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<210> 11
<211> 782
<212> DNA
<213> Rattus norvegicus

<220>
<221> misc_feature
<222> (545)
<223> Wherein n is g or a or t or c

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tgaaggcaga cagaggtcat ggaagagacc aggtcagaa acagccccac catgcacagc 180
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agtcagacct tacatctcac acacaaatga actcaaaata taccagagag caaagctaag 300
agctaaaatc aagtttcccta gggcaagctg tagtaggctc ccttgggtgg gttaatgctt 360
ttgtggatgt gactaccaa aattcaacca gagccaacga cccaactatt aatgggcagt 420
ggacctaaag agatttcttc aaacgatata taaagaaggc caccaagcat ataaaacatg 480
tgacatcagt agtcagagag atgggaagca gaagcactag cagatcttaa cacctactag 540
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cagcagagtt accctaagac atacaatctg ctgctgtgat gctaagcagg atccgaggga 720
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cc 782

<210> 12
<211> 1025
<212> DNA
<213> Rattus norvegicus

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catgg 1025

<210> 13
<211> 256
<212> DNA
<213> Rattus norvegicus

<400> 13
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aattcaagac attgttccac acaatgaaca atcgcacaca tgagaactgc acctagaatg 180
tccatcctag aatctccatc catccagtca aagtgtctgag ctactgact gaaggaaaca 240
tgacctgtgt tctaga 256

<210> 14
<211> 579
<212> DNA
<213> Rattus norvegicus

<400> 14
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aattcaagac attgttccac acaatgaaca atcgcacaca tgagaactgc acctagaatg 180
tccatcctag aatctccatc catccagtca aagtgtctgag ctactgact gaaggaaaca 240
tgacctgtgt tctagaacgt agctggctat gaagtttact catgtgtaaa ttccttaaaa 300
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catcagattg acacaaccta cttctaagta cactattgc 579

<210> 15
<211> 1017
<212> DNA
<213> Rattus norvegicus

<400> 15

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<211> 1022

<212> DNA

<213> Homo sapiens

<400> 16

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tc 1022
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<210> 17

<211> 348

<212> DNA

<213> Rattus norvegicus

<400> 17

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cgctagtgtt aacgccgttc tgtacaacct aactcactgg caagaacaca gtgttggggc 180
tttcgaccac tagaacaac ttttttcaat tgacagttgc agaattgtgg agtgttttta 240
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cattgatctt ttgctaatgc agttagcagt atgttttgca tgtatgactt aataaatcct 300
tgaatcataa aaaaaaaaaa aaaaatgtct ttggaacttg aaaaaaaaa 348

<210> 18
<211> 352
<212> DNA
<213> Homo sapiens

<400> 18
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<210> 19
<211> 484
<212> DNA
<213> Rattus norvegicus

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accccaatga cagatcaaa gcctagactg ggagcggcca gggcagcggc tgccatgggtg 360
ttggagtttc gggggggcca ggggcagagc ccacgcacag ggccctcata gagcactgtg 420
cggggcccac tactatgtgc ggcagccagg ggtccctcca gccggaagcc atcaggatgt 480
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<210> 20
<211> 161
<212> PRT
<213> Rattus norvegicus

<400> 20
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20 25 30
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35 40 45
Gln Ser Leu Arg Val Thr Met Ala Thr His Pro Asp Gly Phe Arg Leu
50 55 60
Glu Gly Pro Leu Ala Ala Ala His Ser Ser Gly Pro Arg Thr Val Leu
65 70 75 80
Tyr Glu Gly Pro Val Arg Gly Leu Cys Pro Leu Ala Pro Arg Asn Ser

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Arg	Val	Ile	Gly	Val	Leu	Val	Ala	Asp	Leu	Ser	Leu	Thr	Asp	Met	His	
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<210> 21
 <211> 161
 <212> PRT
 <213> Caenorhabditis elegans

<400> 21																
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Leu	Trp	Gly	Ala	Asn	Asp	Ile	Gln	Lys	Met	Ala	Asp	Val	Gly	Ser	Leu	
		35				40						45				
Lys	Gly	Leu	Thr	Val	Thr	Met	Ile	Lys	His	Pro	Thr	Ser	Phe	Lys	Leu	
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Gly	Ser	Pro	Leu	Phe	Glu	Ile	Asn	Glu	Lys	Ala	Lys	Leu	Glu	Glu	Thr	
65				70					75						80	
Asn	Glu	Thr	Val	Leu	Tyr	Glu	Gly	Ser	Val	Arg	Gly	Leu	Cys	Pro	Leu	
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Ala	Pro	Asn	Asn	Val	Asn	Thr	Met	Ala	Gly	Gly	Ala	Leu	Ala	Ala	Ser	
		100					105					110				
Asn	Leu	Gly	Phe	Asp	Glu	Val	Lys	Ala	Lys	Leu	Ile	Ser	Asp	Pro	Lys	
	115						120					125				
Met	Thr	Asp	Trp	His	Val	Val	Glu	Val	Arg	Val	Glu	Gly	Asp	Asp	Gly	
	130					135					140					
Phe	Glu	Val	Ile	Thr	Arg	Arg	Asn	Asn	Pro	Ala	Lys	Pro	Gly	Ala	Val	
145					150					155					160	
Thr																

<210> 22
 <211> 1019
 <212> DNA
 <213> Rattus norvegicus

<400> 22
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 aagtcggggg acggtggaac tatgtgtgcg ttggagttta cagtacagat gagttgtcag 120
 agctgcgtgg acgctgtgca caagaccctg aaaggggcgg cgggtgtcca gaatgtggaa 180
 gttcagttgg agaaccagat ggtgttgggt cagaccactt tgcccagcca ggaggtgcaa 240
 gcgctcctgg aaagcacagg gaggcaggct gtactcaagg gcatgggcag cagccaacta 300
 aagaatctgg gagcagcagt ggccattatg gagggcagtg gcaccgtaca gggggtggtc 360
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 caccggggag atctgggcaa tgttcacgct gaagctagtg gccgagctac cttccggata 600
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 aggttggcct gtggcatcat tgcacgctct gctggccttt tccagaatcc caagcagatc 780
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 agtctccta gctgaacatc ttctgcaga gggagcctca agccttgct tgtataggcc 960
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<210> 23
 <211> 878
 <212> DNA
 <213> Rattus norvegicus

<400> 23
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 gttccacaag agggaaacct gatgtggcta agctcaatgg ggattggttt tctattgtcg 180
 tggcctctaa caaaagagaa aagatagaag agaatggcag catgagagtt tttatgcagc 240
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 gcagggaaact atatttggtt gcctacaaaa cgccagagga tggcgaatat tttgttgagt 360
 atgacggagg gaatacattt actatactta agacagacta tgacagatat gtcattgtttc 420
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 ttgctcttgc agttcaataa atgattaccc ttgcactt 878

<210> 24
 <211> 256
 <212> DNA
 <213> Rattus norvegicus

<400> 24
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agaagggcat gctccagctc ctgcaggaca aggattcctg cagctggctc ctgaaggaaa 180
 agagtgcac cagtgagaag aggagattcc tgaaggagcg gttggcaagg ctggcccaag 240
 ctcagcgag gctagc 256

<210> 25
 <211> 84
 <212> PRT
 <213> Rattus norvegicus

<400> 25
 Met Asp Glu Ile Phe Gln His Leu Asn Ala Tyr Arg Gln Glu Ala His
 1 5 10 15
 Asn Cys Ile Ser Ser His Ile Pro Leu Ile Ile Gln Tyr Phe Ile Leu
 20 25 30
 Lys Met Phe Ala Glu Lys Leu Gln Lys Gly Met Leu Gln Leu Leu Gln
 35 40 45
 Asp Lys Asp Ser Cys Ser Trp Leu Leu Lys Glu Lys Ser Asp Thr Ser
 50 55 60
 Glu Lys Arg Arg Phe Leu Lys Glu Arg Leu Ala Arg Leu Ala Gln Ala
 65 70 75 80
 Gln Arg Arg Leu

<210> 26
 <211> 84
 <212> PRT
 <213> Rattus norvegicus

<400> 26
 Met Asp Glu Ile Phe Gln His Leu Asn Ala Tyr Arg Gln Glu Ala His
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 Asn Cys Ile Ser Ser His Ile Pro Leu Ile Ile Gln Tyr Phe Ile Leu
 20 25 30
 Lys Met Phe Ala Glu Lys Leu Gln Lys Gly Met Leu Gln Leu Leu Gln
 35 40 45
 Asp Lys Asp Ser Cys Ser Trp Leu Leu Lys Glu Lys Ser Asp Thr Ser
 50 55 60
 Glu Lys Arg Arg Phe Leu Lys Glu Arg Leu Ala Arg Leu Ala Gln Ala
 65 70 75 80
 Gln Arg Arg Leu

<210> 27
 <211> 368

<212> DNA

<213> Homo sapiens

<400> 27

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caccagctg ggcctgggc gcttccaaat gaccaggag gtggtctgcg acgaatgcc 180
taatgtcaaa ctagtgaatg aagaacgaac gctggaagta gaaatagagc ctggggtgag 240
agacggcatg gagtaccctc ttattggaga aggtgagcct cacgtggatg gggagcctgg 300
agatttacgg ttccgaatca aagttgtcaa gcaccaata tttgaaagga gaggagatga 360
ttgtaca 368
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<210> 28

<211> 121

<212> PRT

<213> Rattus norvegicus

<400> 28

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Arg Asn Lys Pro Val Ala Arg Gln Ala Pro Gly Lys Arg Lys Cys Asn
  20          25          30

Cys Arg Gln Glu Met Arg Thr Thr Gln Leu Gly Pro Gly Arg Phe Gln
  35          40          45

Met Thr Gln Glu Val Val Cys Asp Glu Cys Pro Asn Val Lys Leu Val
  50          55          60

Asn Glu Glu Arg Thr Leu Glu Val Glu Ile Glu Pro Gly Val Arg Asp
  65          70          75          80

Gly Met Glu Tyr Pro Phe Ile Gly Glu Gly Glu Pro His Val Asp Gly
  85          90          95

Glu Pro Gly Asp Leu Arg Phe Arg Ile Lys Val Val Lys His Arg Ile
 100          105          110

Phe Glu Arg Arg Gly Asp Asp Leu Tyr
 115          120
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<210> 29

<211> 121

<212> PRT

<213> Homo sapiens

<400> 29

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Glu Val Thr Leu Glu Glu Val Tyr Ala Gly Asn Phe Val Glu Val Val
  1          5          10          15

Arg Asn Lys Pro Val Ala Arg Gln Ala Pro Gly Lys Arg Lys Cys Asn
  20          25          30

Cys Arg Gln Glu Met Arg Thr Thr Gln Leu Gly Pro Gly Arg Phe Gln
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35	40	45
Met Thr Gln Glu Val Val Cys Asp Glu Cys Pro Asn Val Lys Leu Val		
50	55	60
Asn Glu Glu Arg Thr Leu Glu Val Glu Ile Glu Pro Gly Val Arg Asp		
65	70	75
Gly Met Glu Tyr Pro Phe Ile Gly Glu Gly Glu Pro His Val Asp Gly		
85	90	95
Glu Pro Gly Asp Leu Arg Phe Arg Ile Lys Val Val Lys His Pro Ile		
100	105	110
Phe Glu Arg Arg Gly Asp Asp Leu Tyr		
115	120	

<210> 30
 <211> 184
 <212> DNA
 <213> Rattus norvegicus

<400> 30
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 aaaa 184

<210> 31
 <211> 183
 <212> DNA
 <213> Mus musculus

<400> 31
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 aaccatgtga tgttaactat tattaataaa ttttaacttt ttttttcaa aaaaaaaaaa 180
 aaa 183

<210> 32
 <211> 184
 <212> DNA
 <213> Mus musculus

<400> 32
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 aaccatgtga tgttaactat tattaataaa ttttaacttt ttttttcaa aaaaaaaaaa 180
 aaaa 184

<210> 33
 <211> 42
 <212> PRT

<213> Rattus norvegicus

<220>

<221> VARIANT

<222> (31)

<223> Wherein Xaa is any amino acid as described in the specification

<400> 33

Tyr Lys Ile Ser Thr Glu Cys His Tyr Asp Arg Ser Glu His His Pro
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His Ser Gln Glu His Leu Gln Arg Lys Ser Ile Phe Arg Glu Xaa His
20 25 30

Arg Asn Arg Lys Ser Lys Arg Thr Lys Arg
35 40

<210> 34

<211> 48

<212> PRT

<213> Drosophila melanogaster

<400> 34

Tyr Lys Val His Ser Lys Val His Lys Ala Arg Met Asp His Ser Pro
1 5 10 15

Arg Ser Lys Asp Arg Lys Asp Arg Lys Gly Arg Lys Ala His Ser Lys
20 25 30

Ile His Lys Asp Tyr Ser Arg Asn Arg Lys Asp His Arg Val Arg Lys
35 40 45

<210> 35

<211> 382

<212> DNA

<213> Rattus norvegicus

<400> 35

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ccatatgctg gaaccgcgga agccgtcaaa gccctgggtg ccaagcactg tgtgaagggt 180
gtgaccgaag ctcacgtcga ccagaaaaac aaggtgggtc ccaccccggc cttcatgtgt 240
gagaccgaac tccaccacat ccacgacggg attggggcca tgggtgaagaa ggtgctggaa 300
ctcacgggaa agtaacacca ccagcaccac gcttggcctc cgtcgtcgct gtggcacgct 360
cagcctgtgt gctccggtca gc 382

<210> 36

<211> 385

<212> DNA

<213> Homo sapiens

<400> 36
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ccttatgccg ggaccgcaga ggccatcaag gccctgggtg ccaagcactg cgtgaaggaa 180
gtggtcgaag ctacagtga ccagaaaaac aaggtgggtc cgaccccagc cttcatgtgc 240
gagacggcac tccactacat ccatgatggg atcggagcca tggtaggaa ggtgctggaa 300
ctcactggaa agtgacgcgc atggacgggg ccagctagg cgccaggact tggcctcacc 360
ctctggctga ggagctgtcg gctgc 385

<210> 37
<211> 104
<212> PRT
<213> Rattus norvegicus

<400> 37
Glu Phe His Gly Ala Lys Lys Pro Ile Gly Leu Cys Cys Ile Ala Pro
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Val Leu Ala Ala Lys Val Ile Lys Gly Val Glu Val Thr Val Gly His
20 25 30
Glu Gln Glu Glu Gly Gly Lys Trp Pro Tyr Ala Gly Thr Ala Glu Ala
35 40 45
Val Lys Ala Leu Gly Ala Lys His Cys Val Lys Gly Val Thr Glu Ala
50 55 60
His Val Asp Gln Lys Asn Lys Val Val Thr Thr Pro Ala Phe Met Cys
65 70 75 80
Glu Thr Glu Leu His His Ile His Asp Gly Ile Gly Ala Met Val Lys
85 90 95
Lys Val Leu Glu Leu Thr Gly Lys
100

<210> 38
<211> 104
<212> PRT
<213> Rattus norvegicus

<400> 38
Glu Phe His Gln Ala Gly Lys Pro Ile Gly Leu Cys Cys Ile Ala Pro
1 5 10 15
Val Leu Ala Ala Lys Val Leu Arg Gly Val Glu Val Thr Val Gly His
20 25 30
Glu Gln Glu Glu Gly Gly Lys Trp Pro Tyr Ala Gly Thr Ala Glu Ala
35 40 45
Ile Lys Ala Leu Gly Ala Lys His Cys Val Lys Glu Val Val Glu Ala
50 55 60

His Val Asp Gln Lys Asn Lys Val Val Thr Thr Pro Ala Phe Met Cys
65 70 75 80

Glu Thr Ala Leu His Tyr Ile His Asp Gly Ile Gly Ala Met Val Arg
85 90 95

Lys Val Leu Glu Leu Thr Gly Lys
100

<210> 39
<211> 661
<212> DNA
<213> Rattus norvegicus

<400> 39
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aggcagacag aggtcatgga agagaccagg ctacagaaaca gccccaccat gcacagcggg 180
atgttttccc accaagggca acatgcaaag ccaggtatcc acatgggtag agtagaaagt 240
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taaaatcaag tttcctaggg caagctgtag taggctccct tgggtgggtt aatgcttttg 360
tggatgtgac taccaaaaat tcaaccagag ccaacgaccc aactattaat gggcagtggg 420
cctaaagaga tttcttcaaa cgatatataa agaaggccac caagcatata aaacatgtga 480
catcagtagt cagagagatg ggaagcagaa gcactagcag atcttaacac ctactagaac 540
agccactaaa aaagagtaag actcacaagg acatgggcac ttctaattctc tgtgactgc 600
tgccaggaca tacaatagtg tggtcactat ggagactacg gcagtgccta ctaataacag 660
c 661

<210> 40
<211> 661
<212> DNA
<213> Rattus norvegicus

<400> 40
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aggcagacag aggtcatgga agagaccagg ctacagaaaca gccccaccat gcacagcggg 180
atgttttccc accaagggca acatgcaaag ccaggtatcc acatgggtag agtagaaagt 240
cagaccttac atctcacaca caaatgaact caaaatatac cagagagcaa agctaagagc 300
taaaatcaag tttcctaggg caagctgtag taggctccct tgggtgggtt aatgcttttg 360
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cctaaagaga tttcttcaaa cgatatataa agaaggccac caagcatata aaacatgtga 480
catcagtagt cagagagatg ggaagcagaa gcactagcag atcttaacac ctactagaac 540
agccactaaa aaagagtaag actcacaagg acatgggcac ttctaattctc tgtgactgc 600
tgccaggaca tacaatagtg tggtcactat ggagactacg gcagtgccta ctaataacag 660
c 661

<210> 41
<211> 893
<212> DNA
<213> Rattus norvegicus

<400> 41
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atgtggtagc aaggtgggag cagagaactc gcaagctgag cagagccttc ggggtccctt 240
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<210> 42
 <211> 1131
 <212> DNA
 <213> Rattus norvegicus

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<400> 42
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<210> 43
 <211> 1994
 <212> DNA
 <213> Rattus norvegicus

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<400> 43
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accgctcac ctgctcccc cagcccagca gaggttttct acaatccctc ctgctccct 180
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aggccgcctg gaagtgggca cggaaacat cattgacaag tccaaggctg tcaagacagt 480

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<210> 44

<211> 1850

<212> DNA

<213> *Rattus norvegicus*

<400> 44

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caggtggggc	ctagacatcc	ccgaagtcac	attaactgct	cggtaatgga	accaacagaa	240
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